

EXHIBIT 7



UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In Re: Methyl Tertiary Butyl Ether ("MtBE")
Products Liability Litigation

MDL No. 1358
Master File C.A. No.
1:00-1898 (SAS)

This document relates to the following cases:

City of New York v. Amerada Hess Corp., et al.
04 Civ. 3417

EXPERT REPORT OF Donald K. Cohen, CPG
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February 7, 2009

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February 7, 2009

Signature

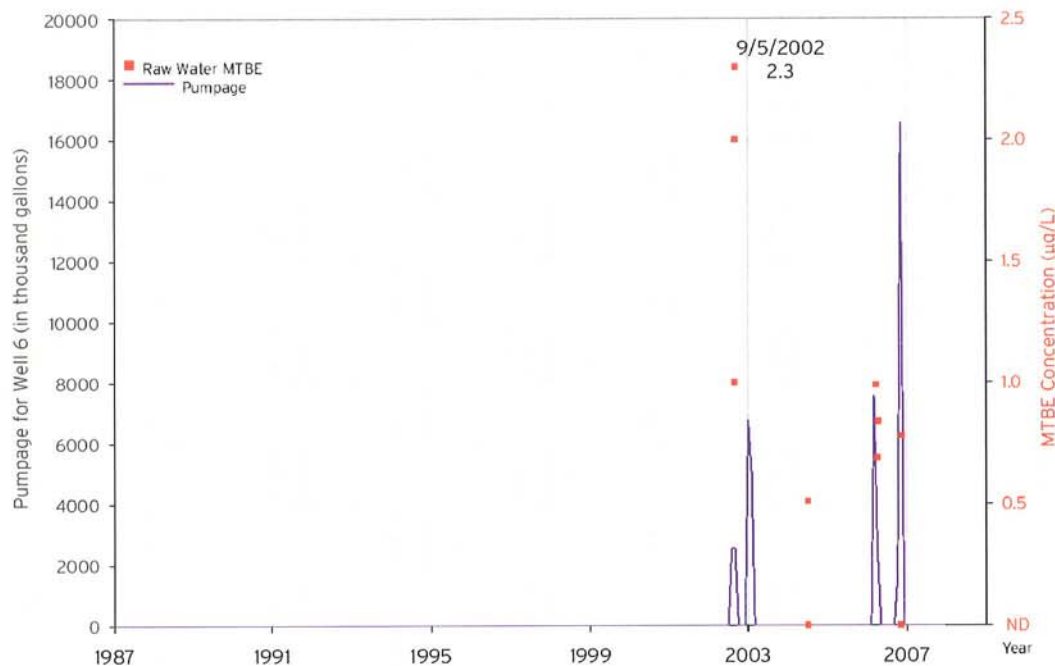
Date

Section 7
MTBE Past & Current Impacts

7.2.1.1. MTBE Detection in Well 6

As shown in **Figure 7-3**, MTBE was first detected in Well 6 on August 8, 2002¹ at 1 µg/L and the highest detected MTBE result was on September 5, 2002 at 2.3 µg/L. In total, of the 10 samples taken, 8 had detectable concentrations of MTBE. **Figure 7-3** shows that the detection of MTBE coincided with the two periods when Well 6 was pumped for pilot testing from 2002 to 2003 and for three subsequent sampling events.

Figure 7-3: Well 6 Pumping and MTBE Detection History 1987 to 2008



Source: See **Appendix A** for pumping history and water quality data.

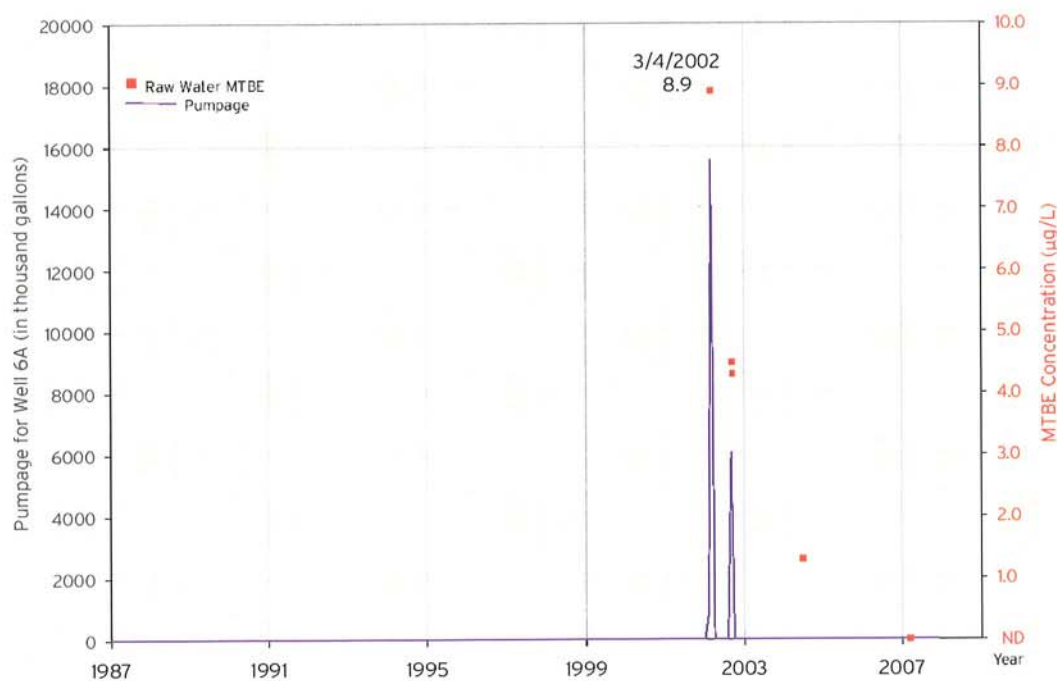
¹ The dates referenced for detections of MTBE in a well are the dates that the samples were collected.

Section 7
MTBE Past & Current Impacts

7.2.1.2. MTBE Detection in Well 6A

As presented in **Figure 7-4**, MTBE was initially detected in Well 6A on March 4, 2002 at 8.9 $\mu\text{g/L}$, which is also the maximum concentration detected, and was last detected on June 29, 2004 at 1.3 $\mu\text{g/L}$. The MTBE concentrations spiked when Well 6A was pumped between 2002 and 2003 as part of the pilot test. Subsequent sampling events detected a decreasing concentration of MTBE as Well 6A was no longer being pumped on a regular basis. Of the 7 groundwater samples taken from Well 6A, MTBE was detected in 5 samples.

Figure 7-4: Well 6A Pumping and MTBE Detection History 1987 to 2008



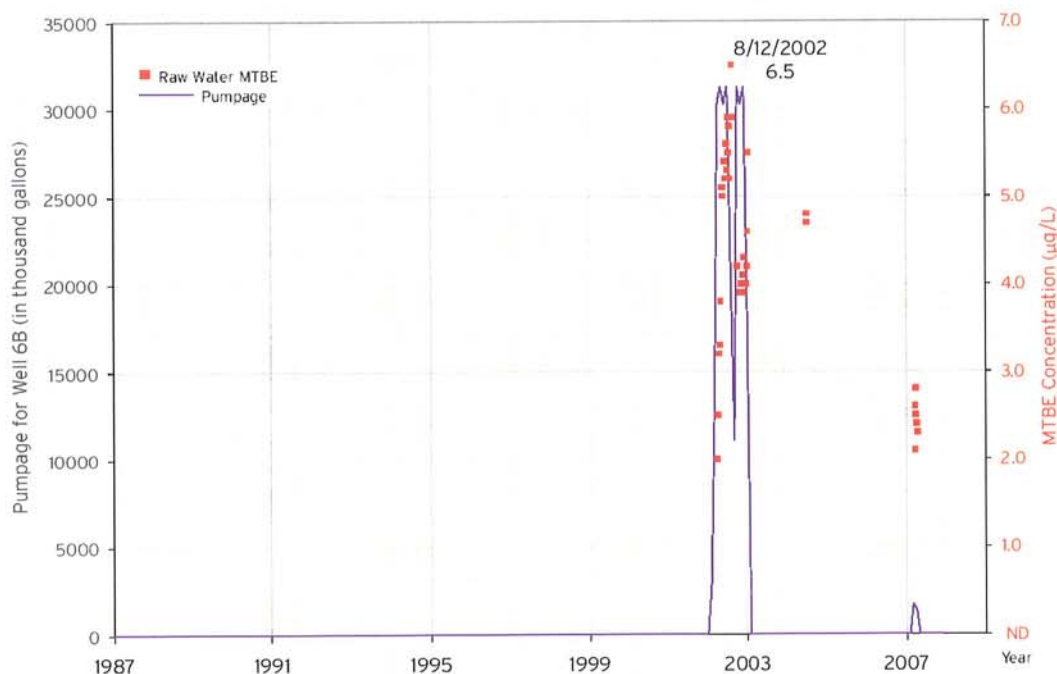
Source: See **Appendix A** for pumping history and water quality data.

Section 7
MTBE Past & Current Impacts

7.2.1.3. MTBE Detection in Well 6B

Figure 7-5 shows that MTBE was first detected in Well 6B on March 26, 2002 at 2 $\mu\text{g/L}$ when Well 6B was beginning to be used for the pilot test. Well 6B was heavily pumped during the year-long pilot and MTBE concentrations were consistently detected between 2 and 6.5 ppb. The highest detected MTBE concentration of 6.5 $\mu\text{g/L}$ occurred on August 12, 2002. MTBE was last detected on April 10, 2007 at 2.3 $\mu\text{g/L}$ when Well 6B was activated for a sampling purposes. MTBE was detected in all of the 40 groundwater samples collected from Well 6B, again indicating the persistence of MTBE as a contaminant.

Figure 7-5: Well 6B Pumping and MTBE Detection History 1987 to 2008



Source: See **Appendix A** for pumping history and water quality data.

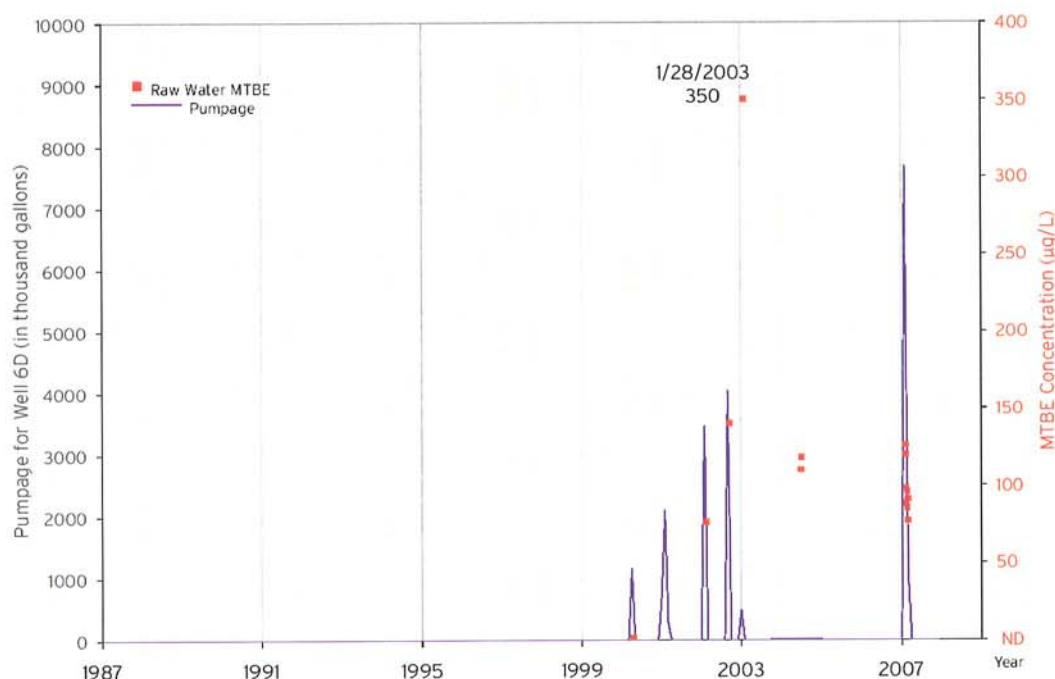
Section 7
MTBE Past & Current Impacts

7.2.1.4. MTBE Detection in Well 6D

As presented in **Figure 7-6**, MTBE was first detected in Well 6D on April 18, 2000 at 1.5 $\mu\text{g/L}$ and was last measured on February 28, 2007 at 77 $\mu\text{g/L}$. The highest MTBE concentration detected was 350 $\mu\text{g/L}$ on 1/28/2003 when Well 6D was being used to supply groundwater for the pilot testing. Most recently, when Well 6D was pumped for a sampling event at the end of 2007, MTBE was once again detected at levels between 75 and 125 $\mu\text{g/L}$.

The persistence of MTBE as a contaminant in this well and the rapid increase in MTBE concentration to the peak of 350 ppb indicates the presence of a plume of MTBE contaminated groundwater located at a relatively close distance. The decrease in concentration after pumping of Well 6D was stopped further indicates that the MTBE plume was moving away from or was at least no longer being pulled into Well 6D.

Figure 7-6: Well 6D Pumping and MTBE Detection History 1987 to 2008

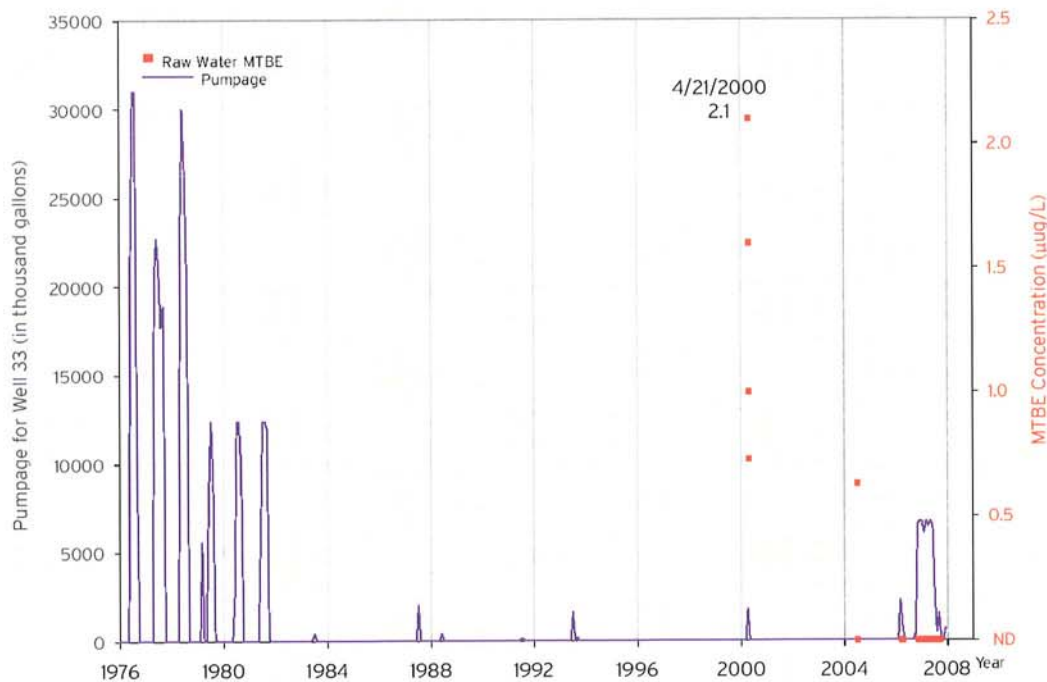


Source: See **Appendix A** for pumping history and water quality data.

7.2.1.5. MTBE Detection in Well 33

Since 2000, Well 33 has only been pumped during sampling events. **Figure 7-7** shows that MTBE was first detected in Well 33 on April 18, 2000 at 0.73 $\mu\text{g/L}$. The highest MTBE concentration detected in Well 33 was 2.1 $\mu\text{g/L}$ on April 21, 2000.

Figure 7-7: Well 33 Pumping and MTBE Detection History 1976 to 2008



Source: See **Appendix A** for pumping history and water quality data.

7.2.2. Modeling of Capture Zones

A refined 6-layer model based on the original USGS groundwater flow model for the Brooklyn Queens Aquifer Study was used to evaluate potential sources of MTBE detected in the Station 6 production wells (full model documentation is contained in **Appendix B**). Since pumping in the Groundwater System has historically been highly variable, transient groundwater flow simulations were developed to simulate the changing hydraulic gradients and flow patterns that have historically occurred throughout the system.

Reverse particle tracking methods were used to delineate areas up-gradient from the Station 6 wells that have historically contributed flow to the wells. Since MTBE travels at approximately the same velocity as groundwater, the contribution areas are also areas where MTBE entering the wells could have been located. Water quality data from each of the Station 6 wells was evaluated to estimate the dates over which MTBE was entering